WHAT IS CLAIMED IS:

1. A test device of an A/D converter comprising:

a first compare decision circuit for comparing an output digital code output from an A/D converter to be measured with a digital code representing a bit transition point supplied for measurement, and for generating as a first decision output a digital signal with a duty factor corresponding to a difference between the two digital codes compared;

a current supply circuit for supplying a current in response to the duty factor of the first decision output;

a first integrator circuit for integrating the current supplied from said current supply circuit to generate an integral output voltage with such a sign that the two digital codes compared by said first compare decision circuit are equalized;

an adder-subtracter circuit for superimposing one of a triangular wave signal and sawtooth wave signal on the integral output voltage of said first integrator circuit to be output as an input voltage to said A/D converter to be measured; and

a measurement output terminal for outputting the integral output voltage of said first integrator circuit for measurement.

2. A test device of an A/D converter according to claim 1, wherein said current supply circuit comprises:

a first positive current source;

a first negative current source, an absolute value of said first negative current source being set substantially equal to a current value of said first positive current source; and

a switching circuit for connecting a first one of said first positive current source and said first negative current source to said integrator circuit during a time period in which the

decision output indicates that the output digital code of the A/D converter to be measured is greater than the digital code representing the bit transition point, to reduce the integral output voltage, and for connecting a second one of said first positive current source and said first negative current source to said integrator circuit during a time period in which the decision output indicates that the output digital code of the A/D converter to be measured is smaller than the digital code representing the bit transition point, to increase the integral output voltage.

3. The test device of the A/D converter according to claim 2, further comprising:

a second compare decision circuit for comparing the output digital code output from said A/D converter to be measured with an upper digital code which is greater than the digital code representing the bit transition point, and for generating as a second decision output a digital signal with a duty factor corresponding to a difference between the two digital codes compared; and

a third compare decision circuit for comparing the output digital code output from said A/D converter to be measured with a lower digital code which is smaller than the digital code representing the bit transition point, and for generating as a third decision output a digital signal with a duty factor corresponding to a difference between the two digital codes compared, wherein

said current supply circuit further comprising:

a second positive current source; and

a second negative current source, an absolute value

of said second negative current source being set substantially equal to a current value of said second positive current source, and wherein

said switching circuit of said current supply circuit connects to said integrator circuit one of said second positive current source and said second negative current source, which has a same current direction as one of said first positive current source and first negative current source, which is connected to said integrator circuit, such that the integral output voltage is reduced during a time period in which the second decision output indicates that the digital code output from said A/D converter is greater than the upper digital code, and that the integral output voltage is increased during a time period in which the third decision output indicates that the digital code output from said A/D converter is smaller than the lower digital code.

4. The test device of the A/D converter according to claim 2, further comprising a filter circuit connected between said integrator circuit and said measurement output terminal, for outputting the integral output voltage of the integrator circuit for the measurement.

5. The test device of an A/D converter according to claim 1, wherein said current supply circuit comprises:

a second integrator circuit for integrating the digital signal as the first decision output; and

a voltage-difference-to-current converter for converting a difference voltage between a reference voltage and an integral output voltage of said second integrator circuit into a current

corresponding to the difference voltage.